Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

		New or	significa	ntly		New or	significan	tly impr	oved produ	ıcts	
		improve	d produc ocesses	ts or			jood or rvice	G	oods	Services	
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No
				Industr	y (number)						
All industries	21-23, 31-33, 42-81	1,138,671	190,077	948,594	1,138,671	108,376	1,030,296	68,992	1,069,679	80,030	1,058,641
Manufacturing industries	31-33	113,066	36,989	76,078	113,066	24,937	88,129	22,514	90,552	12,092	100,975
Food	311	9,763	2,764	6,999	9,763	1,791	7,972	1,592	8,171	668	9,094
Beverages and tobacco products	312	2,863	1,052	1,811	2,863	644	2,220	644	2,220	293	2,570
Textiles, apparel, and leather products	313-16	4,689	1,250	3,440	4,689	942	3,747	800	3,889	360	4,330
Wood products	321	5,526	1,148	4,378	5,526	487	5,039	436	5,090	252	5,274
Paper	322	1,447	447	1,000	1,447	265	1,182	210	1,237	115	1,332
Printing and related support activities	323	8,604	2,258	6,346	8,604	1,378	7,226	1,033	7,572	1,168	7,437
Petroleum and coal products	324	412	98	314	412	81	331	67	345	33	379
Chemicals	325	5,259	2,384	2,875	5,259	1,881	3,378	1,816	3,443	834	4,426
Basic chemicals	3251	692	348	345	692	268	424	263	430	137	550
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	633	220	413	633	162	471	162	471	71	562
Pesticides, fertilizers, and other agricultural chemicals	3253	261	103	159	261	76	186	75	187	40	222
Pharmaceuticals and medicines	3254	1,384	565	819	1,384	460	924	433	951	182	1,202
Soaps, cleaning compounds, and toilet preparations	3256	929	475	454	929	359	570	349	580	134	79:
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,360	675	685	1,360	557	803	536	824	271	1,089
Plastics and rubber products	326	5,555	1,990	3,565	5,555	1,419	4,136	1,384	4,171	645	4,909
Nonmetallic mineral products	327	4,758	1,131	3,627	4,758	842	3,916	792	3,967	466	4,292
Primary metals	331	2,033	706	1,327	2,033	280	1,752	243	1,790	108	1,92
Fabricated metal products	332	24,182	7,143	17,039	24,182	4,173	20,009	3,553	20,630	2,557	21,62
Machinery	333	10,843	4,261	6,582	10,843	3,132	7,710	2,933	7,909	1,223	9,620
Agricultural implements	33311	530	224	306	530	196	335	196	335	36	494
Semiconductor machinery	333242	78	42	37	78	37	41	37	41	13	6
Engines, turbines, and power transmission equipment	3336	446	167	279	446	136	310	136	310	32	414
Other machinery	other 333	9,788	3,828	5,960	9,788	2,764	7,025	2,565	7,224	1,141	8,647

Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

		New or significantly			New or significantly improved products							
			d product cesses	s or			ood or vice	God	ods	Services		
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No	
Computer and electronic products	334	5,477	2,894	2,583	5,477	2,528	2,949	2,395	3,081	988	4,48	
Communications equipment	3342	736	437	299	736	416	321	415	322	149	58	
Semiconductors and other electronic components	3344	2,008	894	1,114	2,008	708	1,299	661	1,347	226	1,78	
Navigational, measuring, electromedical, and control instruments	3345	1,932	1,153	779	1,932	1,048	885	988	945	453	1,47	
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	335	193	142	335	169	166	161	173	106	22	
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	270	167	103	270	142	128	138	132	64	20	
Other measuring and controlling devices	other 3345	1,328	793	534	1,328	737	591	688	640	283	1,04	
Other computer and electronic products	other 334	800	410	391	800	356	444	332	468	159	64	
Electrical equipment, appliances, and components	335	2,364	1,086	1,277	2,364	859	1,505	836	1,528	273	2,09	
Transportation equipment	336	5,058	1,912	3,146	5,058	1,448	3,610	1,310	3,748	704	4,35	
Automobiles, bodies, trailers, and parts	3361-63	3,134	1,181	1,952	3,134	884	2,249	823	2,311	470	2,66	
Aerospace products and parts	3364	861	268	593	861	239	622	215	646	73	78	
Aircraft, aircraft engines, and aircraft parts	336411- 13	828	253	575	828	225	603	204	624	65	76	
Guided missiles, space vehicles, and related parts	336414- 15, 336419	33	16	18	33	14	20	12	22	8	2	
Military armored vehicles, tanks, and tank components	336992	23	9	14	23	6	17	6	17	3	2	
Other transportation	other 336	1,041	454	587	1,041	319	722	266	775	159	88	
Furniture and related products	337	5,660	1,274	4,386	5,660	588	5,072	510	5,150	295	5,36	
Miscellaneous manufacturing	339	8,573	3,190	5,383	8,573	2,199	6,374	1,960	6,613	1,110	7,46	
Medical equipment and supplies	3391	3,057	1,338	1,719	3,057	942	2,115	843	2,215	402	2,65	
Other miscellaneous manufacturing	3399	5,516	1,852	3,664	5,516	1,257	4,259	1,117	4,399	708	4,80	

Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

			significa					tly impr	oved produ	ucts	
		improve	d produc ocesses				ood or vice	Go	oods	Services	
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No
Nonmanufacturing industries	21-23, 42-81	1,025,605	153,088	872,516	1,025,605	83,439	942,166	46,478	979,127	67,938	957,667
Mining, extraction, and support activities	21	6,761	997	5,764	6,761	389	6,372	132	6,629	271	6,490
Utilities	22	1,200	79	1,122	1,200	58	1,143	6	1,194	56	1,145
Wholesale trade	42	91,941	21,397	70,543	91,941	13,596	78,344	11,260	80,681	7,100	84,840
Electronic shopping and electronic auctions	454111- 12	4,147	1,291	2,855	4,147	955	3,191	840	3,306	507	3,640
Transportation and warehousing	48-49	39,906	6,053	33,853	39,906	2,132	37,775	955	38,951	2,129	37,778
Information	51	17,113	4,823	12,290	17,113	4,062	13,051	2,411	14,702	3,462	13,650
Publishing	511	5,801	1,951	3,850	5,801	1,570	4,231	1,317	4,484	1,152	4,648
Newspaper, periodical, book, and directory publishers	5111	3,407	498	2,909	3,407	257	3,151	204	3,204	189	3,218
Software publishers	5112	2,393	1,453	941	2,393	1,313	1,080	1,113	1,280	963	1,430
Telecommunications	517	2,568	487	2,081	2,568	384	2,184	56	2,511	378	2,190
Data processing, hosting, and related services	518	3,105	1,471	1,634	3,105	1,335	1,770	828	2,277	1,179	1,926
Other information	other 51	5,640	915	4,725	5,640	773	4,867	209	5,430	753	4,887
Finance and insurance	52	45,282	6,182	39,100	45,282	2,532	42,750	337	44,945	2,474	42,808
Real estate and rental and leasing	53	36,032	3,431	32,601	36,032	1,959	34,073	1,065	34,967	1,493	34,539
Lessors of nonfinancial intangible assets (except copyrighted works)	533	110	15	95	110	8	102	4	106	5	105
Other real estate and rental and leasing	other 53	35,922	3,416	32,506	35,922	1,951	33,971	1,061	34,861	1,488	34,434
Professional, scientific, and technical services	54	154,446	28,583	125,863	154,446	18,841	135,605	9,588	144,858	16,266	138,180
Architectural, engineering, and related services	5413	25,214	5,267	19,947	25,214	3,262	21,952	1,427	23,787	2,822	22,392
Computer systems design and related services	5415	19,695	8,544	11,150	19,695	7,179	12,515	4,207	15,488	6,167	13,528
Scientific research and development services	5417	2,790	1,192	1,599	2,790	1,002	1,789	798	1,992	621	2,169
Biotechnology research and development	541711	543	215	328	543	183	360	127	416	136	407
Physical, engineering, and life sciences	541712	2,055	932	1,123	2,055	784	1,270	658	1,397	460	1,595

Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

		New or	significa	ntly		New or significantly improved products						
		improve	d produc ocesses				ood or vice	G	oods	Services		
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No	
(except biotechnology) research and development												
Social sciences and humanities research and development	541720	192	45	148	192	35	158	13	179	26	167	
Other professional, scientific, and technical services	other 54	106,747	13,581	93,166	106,747	7,397	99,350	3,157	103,590	6,656	100,091	
Health care services	621-23	167,465	26,131	141,334	167,465	15,018	152,447	5,418	162,047	14,988	152,477	
Other nonmanufacturing	23, 44-45 (excluding 454111- 12), 55- 56, 624, 71-72, 81	461,312	54,120	407,192	461,312	23,897	437,415	14,466	446,847	19,192	442,120	
All companies (number of domestic employees)	_	1,138,671	190,077	948,594	1,138,671	108,376	1,030,296	68,992	1,069,679	80,030	1,058,641	
Micro companies ^e												
5-9	_	307,934	47,350	260,583	307,934	28,229	279,705	16,748	291,186	22,230	285,704	
Small companies												
10-19	_	387,796	62,196	325,600	387,796	36,273	351,522	22,860	364,936	27,987	359,808	
20-49	_	290,964	49,297	241,667	290,964	26,191	264,773	16,859	274,106	18,884	272,080	
Medium companies												
50-99	_	83,527	17,298	66,229	83,527	9,520	74,008	6,572	76,955	6,377	77,150	
100-249	_	43,846	8,960	34,886	43,846	4,791	39,055	3,348	40,498	2,635	41,210	
Large companies												
250-499	_	11,925	2,145	9,781	11,925	1,360	10,565	1,067	10,858	728	11,197	
500-999	_	5,669	1,152	4,517	5,669	929	4,739	589	5,080	537	5,132	
1,000-4,999	_	5,125	995	4,130	5,125	731	4,394	638	4,487	401	4,724	
5,000-9,999	_	721	206	516	721	170	551	157	564	110	611	
10,000-24,999	_	838	396	442	838	118	720	106	732	88	750	
25,000 or more	_	326	83	243	326	64	262	49	277	53	273	
			Ind	ustry prop	ortions (percer	nt)						
All industries	21-23, 31-33, 42-81	1,138,671	16.7	83.3	1,138,671	9.5	90.5	6.1	93.9	7.0	93.0	
Manufacturing industries	31-33	113,066	32.7	67.3	113,066	22.1	77.9	19.9	80.1	10.7	89.3	
Food	311	9,763	28.3	71.7	9,763	18.3	81.7	16.3	83.7	6.8	93.2	
Beverages and tobacco products	312	2,863	36.7	63.3	2,863	22.5	77.5	22.5	77.5	10.2	89.8	
Textiles, apparel, and leather products	313-16	4,689	26.7	73.3	4,689	20.1	79.9	17.1	82.9	7.7	92.3	
Wood products	321	5,526	20.8	79.2	5,526	8.8	91.2	7.9	92.1	4.6	95.4	
Paper	322	1,447	30.9	69.1	1,447	18.3	81.7	14.5	85.5	7.9	92.1	
Printing and related support activities	323	8,604	26.2	73.8	8,604	16.0	84.0	12.0	88.0	13.6	86.4	

Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

		New or	significa	ntly		New or	significan	tly impro	ved produ	cts	
		improve	d product cesses				ood or vice	Go	ods	Services	
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No
Petroleum and coal products	324	412	23.8	76.2	412	19.7	80.3	16.3	83.7	7.9	92.1
Chemicals	325	5,259	45.3	54.7	5,259	35.8	64.2	34.5	65.5	15.9	84.1
Basic chemicals	3251	692	50.2	49.8	692	38.7	61.3	37.9	62.1	19.7	80.3
Resins, synthetic rubber, and artificial synthetic fibers and filaments	3252	633	34.7	65.3	633	25.6	74.4	25.6	74.4	11.2	88.8
Pesticides, fertilizers, and other agricultural chemicals	3253	261	39.3	60.7	261	28.9	71.1	28.5	71.5	15.2	84.8
Pharmaceuticals and medicines	3254	1,384	40.8	59.2	1,384	33.2	66.8	31.3	68.7	13.1	86.9
Soaps, cleaning compounds, and toilet preparations	3256	929	51.1	48.9	929	38.7	61.3	37.5	62.5	14.4	85.6
Paints, coatings, adhesives, and other chemicals	3255, 3259	1,360	49.6	50.4	1,360	40.9	59.1	39.4	60.6	19.9	80.
Plastics and rubber products	326	5,555	35.8	64.2	5,555	25.5	74.5	24.9	75.1	11.6	88.4
Nonmetallic mineral products	327	4,758	23.8	76.2	4,758	17.7	82.3	16.6	83.4	9.8	90.2
Primary metals	331	2,033	34.7	65.3	2,033	13.8	86.2	12.0	88.0	5.3	94.
Fabricated metal products	332	24,182	29.5	70.5	24,182	17.3	82.7	14.7	85.3	10.6	89.4
Machinery	333	10,843	39.3	60.7	10,843	28.9	71.1	27.1	72.9	11.3	88.
Agricultural implements	33311	530	42.3	57.7	530	36.9	63.1	36.9	63.1	6.8	93.:
Semiconductor machinery	333242	78	53.2	46.8	78	47.6	52.4	47.6	52.4	16.7	83.
Engines, turbines, and power transmission equipment	3336	446	37.4	62.6	446	30.5	69.5	30.5	69.5	7.2	92.8
Other machinery	other 333	9,788	39.1	60.9	9,788	28.2	71.8	26.2	73.8	11.7	88.
Computer and electronic products	334	5,477	52.8	47.2	5,477	46.2	53.8	43.7	56.3	18.0	82.
Communications equipment	3342	736	59.4	40.6	736	56.5	43.5	56.3	43.7	20.3	79.
Semiconductors and other electronic components	3344	2,008	44.5	55.5	2,008	35.3	64.7	32.9	67.1	11.3	88.
Navigational, measuring, electromedical, and control instruments	3345	1,932	59.7	40.3	1,932	54.2	45.8	51.1	48.9	23.5	76.
Electromedical, electrotherapeutic, and irradiation apparatuses	334510, 334517	335	57.6	42.4	335	50.6	49.4	48.2	51.8	31.7	68.3

Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

		New or significantly				New or	significan	tly impro	oved produ	ıcts	
		improve	d product cesses				ood or vice	Go	ods	Services	
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	270	61.8	38.2	270	52.6	47.4	51.2	48.8	23.7	76.3
Other measuring and controlling devices	other 3345	1,328	59.8	40.2	1,328	55.5	44.5	51.8	48.2	21.3	78.7
Other computer and electronic products	other 334	800	51.2	48.8	800	44.5	55.5	41.5	58.5	19.9	80.
Electrical equipment, appliances, and components	335	2,364	46.0	54.0	2,364	36.3	63.7	35.4	64.6	11.5	88.
Transportation equipment	336	5,058	37.8	62.2	5,058	28.6	71.4	25.9	74.1	13.9	86.
Automobiles, bodies, trailers, and parts	3361-63	3,134	37.7	62.3	3,134	28.2	71.8	26.3	73.7	15.0	85.0
Aerospace products and parts	3364	861	31.1	68.9	861	27.7	72.3	25.0	75.0	8.5	91.
Aircraft, aircraft engines, and aircraft parts	336411- 13	828	30.5	69.5	828	27.2	72.8	24.6	75.4	7.9	92.
Guided missiles, space vehicles, and related parts	336414- 15, 336419	33	47.0	53.0	33	40.9	59.1	34.9	65.1	22.7	77.
Military armored vehicles, tanks, and tank components	336992	23	39.1	60.9	23	26.1	73.9	26.1	73.9	13.0	87.
Other transportation	other 336	1,041	43.6	56.4	1,041	30.7	69.3	25.6	74.4	15.2	84.
Furniture and related products	337	5,660	22.5	77.5	5,660	10.4	89.6	9.0	91.0	5.2	94.
Miscellaneous manufacturing	339	8,573	37.2	62.8	8,573	25.6	74.4	22.9	77.1	13.0	87.
Medical equipment and supplies	3391	3,057	43.8	56.2	3,057	30.8	69.2	27.6	72.4	13.2	86.
Other miscellaneous manufacturing	3399	5,516	33.6	66.4	5,516	22.8	77.2	20.2	79.8	12.8	87.
Nonmanufacturing industries	21-23, 42-81	1,025,605	14.9	85.1	1,025,605	8.1	91.9	4.5	95.5	6.6	93.
Mining, extraction, and support activities	21	6,761	14.8	85.2	6,761	5.8	94.2	2.0	98.0	4.0	96.
Utilities	22	1,200	6.5	93.5	1,200	4.8	95.2	0.5	99.5	4.6	95.
Wholesale trade	42	91,941	23.3	76.7	91,941	14.8	85.2	12.2	87.8	7.7	92.
Electronic shopping and electronic auctions	454111- 12	4,147	31.1	68.9	4,147	23.0	77.0	20.3	79.7	12.2	87.
Transportation and warehousing	48-49	39,906	15.2	84.8	39,906	5.3	94.7	2.4	97.6	5.3	94.
Information	51	17,113	28.2	71.8	17,113	23.7	76.3	14.1	85.9	20.2	79.
Publishing	511	5,801	33.6	66.4	5,801	27.1	72.9	22.7	77.3	19.9	80.7

Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

			significar				significan	tly impro	ved produ	cts	
		improve	d product cesses			Any go		God	ods	Services	
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No
Newspaper, periodical, book, and directory publishers	5111	3,407	14.6	85.4	3,407	7.5	92.5	6.0	94.0	5.6	94.4
Software publishers	5112	2,393	60.7	39.3	2,393	54.9	45.1	46.5	53.5	40.2	59.8
Telecommunications	517	2,568	19.0	81.0	2,568	14.9	85.1	2.2	97.8	14.7	85.
Data processing, hosting, and related services	518	3,105	47.4	52.6	3,105	43.0	57.0	26.7	73.3	38.0	62.
Other information	other 51	5,640	16.2	83.8	5,640	13.7	86.3	3.7	96.3	13.4	86.
Finance and insurance	52	45,282	13.7	86.3	45,282	5.6	94.4	0.7	99.3	5.5	94.
Real estate and rental and leasing	53	36,032	9.5	90.5	36,032	5.4	94.6	3.0	97.0	4.1	95.
Lessors of nonfinancial intangible assets (except copyrighted works)	533	110	13.7	86.3	110	7.3	92.7	3.6	96.4	4.6	95.4
Other real estate and rental and leasing	other 53	35,922	9.5	90.5	35,922	5.4	94.6	3.0	97.0	4.1	95.
Professional, scientific, and technical services	54	154,446	18.5	81.5	154,446	12.2	87.8	6.2	93.8	10.5	89.
Architectural, engineering, and related services	5413	25,214	20.9	79.1	25,214	12.9	87.1	5.7	94.3	11.2	88.8
Computer systems design and related services	5415	19,695	43.4	56.6	19,695	36.5	63.5	21.4	78.6	31.3	68.
Scientific research and development services	5417	2,790	42.7	57.3	2,790	35.9	64.1	28.6	71.4	22.3	77.
Biotechnology research and development	541711	543	39.6	60.4	543	33.7	66.3	23.4	76.6	25.0	75.0
Physical, engineering, and life sciences (except biotechnology) research and development	541712	2,055	45.4	54.6	2,055	38.2	61.8	32.0	68.0	22.4	77.0
Social sciences and humanities research and development	541720	192	23.2	76.8	192	18.0	82.0	6.8	93.2	13.3	86.
Other professional, scientific, and technical services	other 54	106,747	12.7	87.3	106,747	6.9	93.1	3.0	97.0	6.2	93.8
Health care services	621-23	167,465	15.6	84.4	167,465	9.0	91.0	3.2	96.8	9.0	91.0
Other nonmanufacturing	23, 44-45 (excluding	//61 317	11.7	88.3	461,312	5.2	94.8	3.1	96.9	4.2	95.8

TABLE 64

Companies that introduced new or significantly improved products, by industry, industry proportions, and company size: 2014–16

(Number and percent)

		New or significantly improved products or processes			New or significantly improved products							
						Any go	ood or vice	Goods		Services		
Industry and company size	NAICS code	Companies (number)	Yes ^a	No ^b	Companies (number)	Yes ^c	No ^d	Yes	No	Yes	No	
	454111- 12), 55- 56, 624, 71-72, 81											
All companies (number of domestic employees)	_	1,138,671	16.7	83.3	1,138,671	9.5	90.5	6.1	93.9	7.0	93.0	
Micro companies ^e												
5-9	_	307,934	15.4	84.6	307,934	9.2	90.8	5.4	94.6	7.2	92.8	
Small companies												
10-19	_	387,796	16.0	84.0	387,796	9.4	90.6	5.9	94.1	7.2	92.8	
20-49	_	290,964	16.9	83.1	290,964	9.0	91.0	5.8	94.2	6.5	93.5	
Medium companies												
50-99	_	83,527	20.7	79.3	83,527	11.4	88.6	7.9	92.1	7.6	92.4	
100-249	_	43,846	20.4	79.6	43,846	10.9	89.1	7.6	92.4	6.0	94.0	
Large companies												
250-499	_	11,925	18.0	82.0	11,925	11.4	88.6	8.9	91.1	6.1	93.9	
500-999	_	5,669	20.3	79.7	5,669	16.4	83.6	10.4	89.6	9.5	90.5	
1,000-4,999	_	5,125	19.4	80.6	5,125	14.3	85.7	12.5	87.5	7.8	92.2	
5,000-9,999	_	721	28.5	71.5	721	23.6	76.4	21.8	78.2	15.3	84.7	
10,000-24,999	_	838	47.2	52.8	838	14.1	85.9	12.7	87.3	10.5	89.5	
25,000 or more	_	326	25.5	74.5	326	19.5	80.5	15.0	85.0	16.1	83.9	

NAICS = 2012 North American Industry Classification System.

Note(s)

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. These statistics include an adjustment to account for item nonresponse beginning in survey year 2016. This change has affected the comparability of these company count estimates with estimates published for years prior to 2016. These statistics do not include an adjustment to account for unit nonresponse. Statistics are representative of companies located in the United States, regardless of whether the company performed or funded R&D.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey.

^a Includes companies responding "Yes" to at least one of the items on the survey relating to new or significantly improved products or processes.

b Includes companies responding "No" to all of the items on the survey relating to new or significantly improved products or processes.

^c Includes companies responding "Yes" to at least one of the items on the survey relating to new or significantly improved products.

^d Includes companies responding "No" to both of the items on the survey relating to new or significantly improved products.

^e Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.